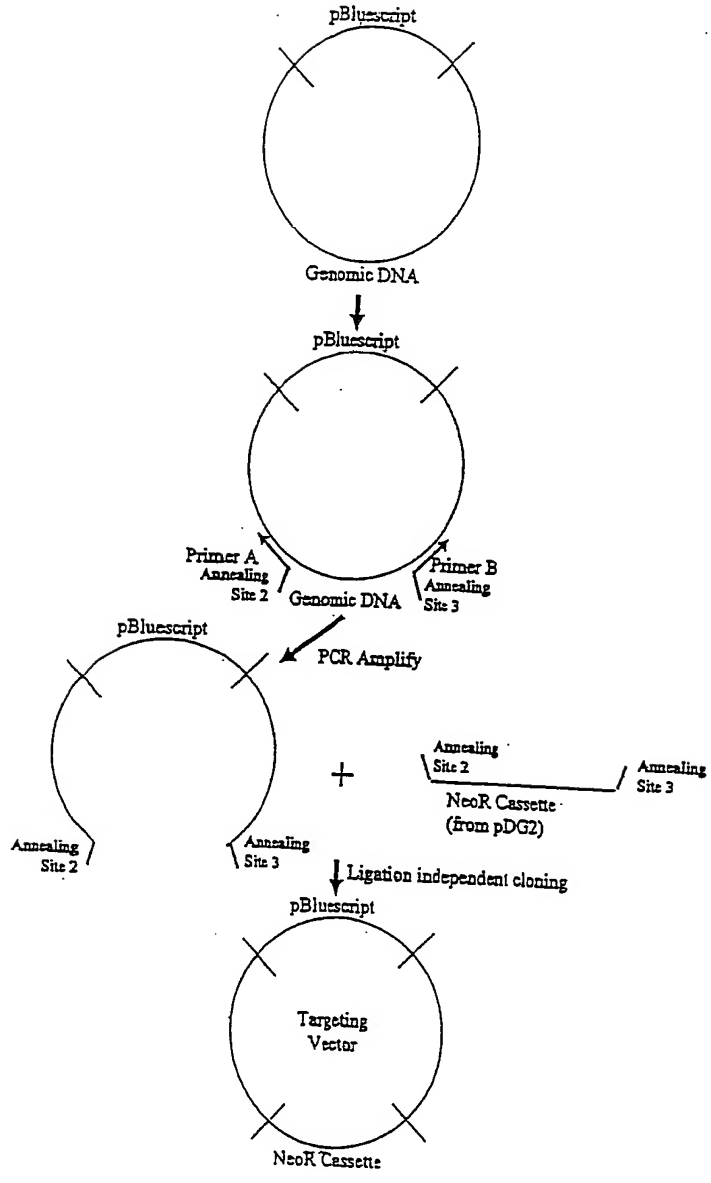

pBluescript
Genomic DNA
pBluescript
Primer A
Annealing
Site 2
Genomic DNA
Primer B
Annealing
Site 3
pBluescript
PCR Amplify
Annealing
Site 2
Annealing
Site 3
NeoR Cassette
(from pDG2)
Annealing
Site 2
Annealing
Site 3
Ligation independent cloning
pBluescript
Targeting
Vector
NeoR Cassette

FIGURE 1

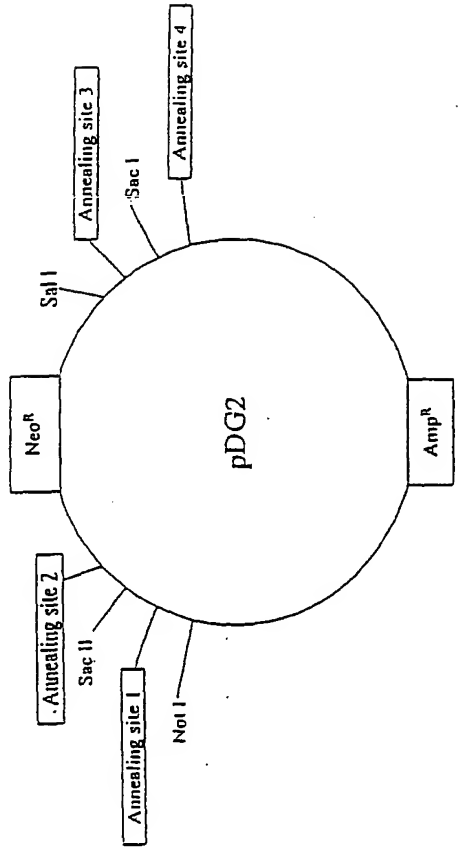

pDG2
Neo$^R$
Amp$^R$
Plasmid Backbone
Annealing site 1
Annealing site 2
Annealing site 3
Annealing site 4
Sal I
Sac I
Sac II
Not I

FIGURE 2A

GTTAACTACG TCAGGTGGCA CTTTTCGGGG AAATGTGCGC GGAACCCCTA TTTGTTTATT TTTCTAAATA CATTCAAATA
TGTATCCGCT CATGAGACAA TAACCCTGAT AAATGCTTCA ATAATATTGA AAAAGGAAGA GTATGAGTAT TCAACATTTC
CGTGTCGCCC TTATTCCCTT TTTTGCGGCA TTTTGCCTTC CTGTTTTTGC TCACCCAGAA ACGCTGGTGA AAGTAAAAGA
TGCTGAAGAT CAGTTGGGTG CACGAGTGGG TTACATCGAA CTGGATCTCA ACAGCGGTAA GATCCTTGAG AGTTTTCGCC
CCGAAGAACG TTCTCCAATG ATGAGCACTT TTAAAGTTCT GCTATGTGGC GCGGTATTAT CCCGTGTTGA CGCCGGGCAA
GAGCAACTCG GTCGCCGCAT ACACTATTCT CAGAATGACT TGGTTGAGTA CTCACCAGTC ACAGAAAAGC ATCTTACGGA
TGGCATGACA GTAAGAGAAT TATGCAGTGC TGCCATAACC ATGAGTGATA ACACTGCGGC CAACTTACTT CTGACAACGA
TCGGAGGACC GAAGGAGCTA ACCGCTTTTT TGCACAACAT GGGGGATCAT GTAACTCGCC TTGATCGTTG GGAACCGGAG
CTGAATGAAG CCATACCAAA CGACGAGCGT GACACCACGA TGCCTGTAGC AATGGCAACA ACGTTGCGCA AACTATTAAC
TGGCGAACTA CTTACTCTAG CTTCCCGGCA ACAATTAATA GACTGGATGG AGGCGGATAA AGTTGCAGGA CCACTTCTGC
GCTCGGCCCT TCCGGCTGGC TGGTTTATTG CTGATAAATC TGGAGCCGGT GAGCGTGGGT CTCGCGGTAT CATTGCAGCA
CTGGGGCCAG ATGGTAAGCC CTCCCGTATC GTAGTTATCT ACACGACGGG GAGTCAGGCA ACTATGGATG AACGAAATAG
ACAGATCGCT GAGATAGGTG CCTCACTGAT TAAGCATTGG TAACTGTCAG ACCAAGTTTA CTCATATATA CTTTAGATTG
ATTTACCCCG GTTGATAATC AGAAAAGCCC CAAAAACAGG AAGATTGTAT AAGCAAATAT TTAAATTGTA AACGTTAATA
TTTTGTTAAA ATTCGCGTTA AATTTTTGTT AAATCAGCTC ATTTTTTAAC CAATAGGCCG AAATCGGCAA AATCCCTTAT
AAATCAAAAG AATAGCCCGA GATAGGGTTG AGTGTTGTTC CAGTTTGGAA CAAGAGTCCA CTATTAAAGA ACGTGGACTC
CAACGTCAAA GGGCGAAAAA CCGTCTATCA GGGCGATGGC CCACTACGTG AACCATCACC CAAATCAAGT TTTTTGGGGT
CGAGGTGCCG TAAAGCACTA AATCGGAACC CTAAAGGGAG CCCCCGATTT AGAGCTTGAC GGGGAAAGCG AACGTGGCGA
GAAAGGAAGG GAAGAAAGCG AAAGGAGCGG GCGCTAGGGC GCTGGCAAGT GTAGCGGTCA CGCTGCGCGT AACCACCACA
CCCGCCGCGC TTAATGCGCC GCTACAGGGC GCGTAAAAGG ATCTAGGTGA AGATCCTTTT TGATAATCTC ATGACCAAAA
TCCCTTAACG TGAGTTTTCG TTCCACTGAG CGTCAGACCC CGTAGAAAAG ATCAAAGGAT CTTCTTGAGA TCCTTTTTTT
CTGCGCGTAA TCTGCTGCTT GCAAACAAAA AAACCACCGC TACCAGCGGT GGTTTGTTTG CCGGATCAAG AGCTACCAAC
TCTTTTTCCG AAGGTAACTG GCTTCAGCAG AGCGCAGATA CCAAATACTG TTCTTCTAGT GTAGCCGTAG TTAGGCCACC
ACTTCAAGAA CTCTGTAGCA CCGCCTACAT ACCTCGCTCT GCTAATCCTG TTACCAGTGG CTGCTGCCAG TGGCGATAAG
TCGTGTCTTA CCGGGTTGGA CTCAAGACGA TAGTTACCGG ATAAGGCGCA GCGGTCGGGC TGAACGGGGG GTTCGTGCAC
ACAGCCCAGC TTGGAGCGAA CGACCTACAC CGAACTGAGA TACCTACAGC GTGAGCTATG AGAAAGCGCC ACGCTTCCCG
AAGGGAGAAA GGCGGACAGG TATCCGGTAA GCGGCAGGGT CGGAACAGGA GAGCGCACGA GGGAGCTTCC AGGGGGAAAC
GCCTGGTATC TTTATAGTCC TGTCGGGTTT CGCCACCTCT GACTTGAGCG TCGATTTTTG TGATGCTCGT CAGGGGGGCG
GAGCCTATGG AAAAACGCCA GCAACGCGGC CTTTTTACGG TTCCTGGCCT TTTGCTGGCC TTTTGCTCAC ATGTAATGTG
AGTTAGCTCA CTCATTAGGC ACCCCAGGCT TTACACTTTA TGCTTCCGGC TCGTATGTTG TGTGGAATTG TGAGCGGATA
ACAATTTCAC ACAGGAAACA GCTATGACCA TGATTACGCC AAGCTACGTA ATACGACTCA CTAGGCGGCC GCGTTTAAAC
AATGTGCTCC TCTTTGGCTT GCTTCCGCGG GCCAAGCCAG ACAAGAACCA GTTGACGTCA AGCTTCCCGG GACGCGTGCT
AGCGGCGCGC CGAATTCCTG CAGGATTCGA GGGCCCCTGC AGGTCAATTC TACCGGGTAG GGGAGGCGCT TTTCCCAAGG
CAGTCTGGAG CATGCGCTTT AGCAGCCCCG CTGGCACTTG GCGCTACACA AGTGGCCTCT GGCCTCGCAC ACATTCCACA
TCCACCGGTA GCGCCAACCG GCTCCGTTCT TTGGTGGCCC CTTCGCGCCA CCTTCTACTC CTCCCCTAGT CAGGAAGTTC
CCCCCCGCCC CGCAGCTCGC GTCGTGCAGG ACGTGACAAA TGGAAGTAGC ACGTCTCACT AGTCTCGTGC AGATGGACAG
CACCGCTGAG CAATGGAAGC GGGTAGGCCT TTGGGGCAGC GGCCAATAGC AGCTTTGCTC CTTCGCTTTC TGGGCTCAGA
GGCTGGGAAG GGGTGGGTCC GGGGGCGGGC TCAGGGGCGG GCTCAGGGGC GGGGCGGGCG CGAAGGTCCT CCCGAGGCCC
GGCATTCTCG CACGCTTCAA AAGCGCACGT CTGCCGCGCT GTTCTCCTCT TCCTCATCTC CGGGCCTTTC GACCTGCAGC
CAATATGGGA TCGGCCATTG AACAAGATGG ATTGCACGCA GGTTCTCCGG CCGCTTGGGT GGAGAGGCTA TTCGGCTATG
ACTGGGCACA ACAGACAATC GGCTGCTCTG ATGCCGCCGT GTTCCGGCTG TCAGCGCAGG GGCGCCCGGT TCTTTTTGTC
AAGACCGACC TGTCCGGTGC CCTGAATGAA CTGCAGGACG AGGCAGCGCG GCTATCGTGG CTGGCCACGA CGGGCGTTCC
TTGCGCAGCT GTGCTCGACG TTGTCACTGA AGCGGGAAGG GACTGGCTGC TATTGGGCGA AGTGCCGGGG CAGGATCTCC
TGTCATCTCA CCTTGCTCCT GCCGAGAAAG TATCCATCAT GGCTGATGCA ATGCGGCGGC TGCATACGCT TGATCCGGCT
ACCTGCCCAT TCGACCACCA AGCGAAACAT CGCATCGAGC GAGCACGTAC TCGGATGGAA GCCGGTCTTG TCGATCAGGA
TGATCTGGAC GAAGAGCATC AGGGGCTCGC GCCAGCCGAA CTGTTCGCCA GGCTCAAGGC GCGCATGCCC GACGGCGATG
ATCTCGTCGT GACCCATGGC GATGCCTGCT TGCCGAATAT CATGGTGGAA AATGGCCGCT TTTCTGGATT CATCGACTGT
GGCCGGCTGG GTGTGGCGGA CCGCTATCAG GACATAGCGT TGGCTACCCG TGATATTGCT GAAGAGCTTG GCGGCGAATG
GGCTGACCGC TTCCTCGTGC TTTACGGTAT CGCCGCTCCC GATTCGCAGC GCATCGCCTT CTATCGCCTT CTTGACGAGT
TCTTCTGAGG GGATCGATCC GTCCTGTAAG TCTGCAGAAA TTGATGATCT ATTAAACAAT AAAGATGTCC ACTAAAATGG
AAGTTTTTCC TGTCATACTT TGTTAAGAAG GGTGAGAACA GAGTACCTAC ATTTTGAATG GAAGGATTGG AGCTACGGGG
GTGGGGGTGG GGTGGGATTA GATAAATGCC TGCTCTTTAC TGAAGGCTCT TTACTATTGC TTTATGATAA TGTTTCATAG
TTGGATATCA TAATTTAAAC AAGCAAAACC AAATTAAGGG CCAGCTCATT CCTCCCACTC ATGATCTATA GATCTATAGA
TCTCTCGTGG GATCATTGTT TTTCTCTTGA TTCCCACTTT GTGGTTCTAA GTACTGTGGT TTCCAAATGT GTCAGTTTCA
TAGCCTGAAG AACGAGATCA GCAGCCTCTG TTCCACATAC ACTTCATTCT CAGTATTGTT TTGCCAAGTT CTAATTCCAT
CAGAAGCTGA CTCTAGATCT GGATCCGGCC AGCTAGGCCG TCGACCTCGA GTGATCAGGT ACCAAGGTCC TCGCTCTGTG
TCCGTTGAGC TCGACGACAC AGGACACGCA AATTAATTAA GGCCGGCCCG TACCCTCTAG TCAAGGCCTT AAGTGAGTCG
TATTACGGAC TGGCCGTCGT TTTACAACGT CGTGACTGGG AAAACCCTGG CGTTACCCAA CTTAATCGCC TTGCAGCACA
TCCCCCTTTC GCCAGCTGGC GTAATAGCGA AGAGGCCCGC ACCGATCGCC CTTCCCAACA GTTGCGCAGC CTGAATGGCG
AATGGCGCTT CGCTTGGTAA TAAAGCCCGC TTCGGCGGGC TTTTTTTT;

FIGURE 2B

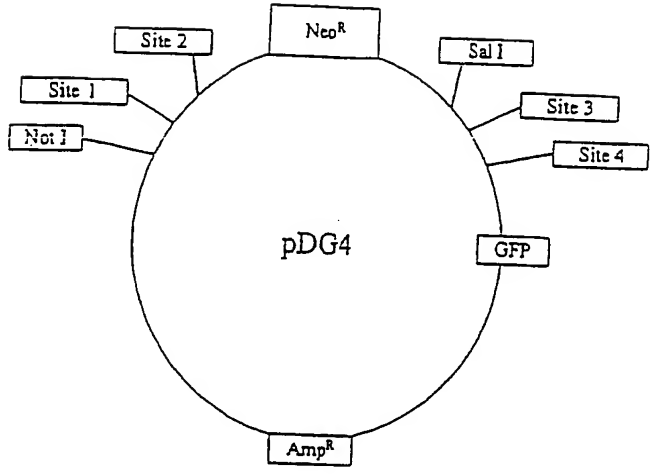



FIGURE 3A

GTTTAATAGT AATCAATTAC GGGGTCATTA GTTCATAGCC CATATATGGA GTTCCGCGTT ACATAACTTA CGGTAAATGG
CCCGCCTGGC TGACCGCCCA ACGACCCCCG CCCATTGACG TCAATAATGA CGTATGTTCC CATAGTAACG CCAATAGGGA
CTTTCCAATG ACGTCAATGG GTGGAGTATT TACGGTAAAC TGCCCACTTG GCAGTACATC AAGTGTATCA TATGCCAAGT
ACGCCCCCTA TTGACGTCAA TGACGGAAAA TGGCCCGCCT GGCATTAAGC CCAGTACATG ACCTTATGGG ACTTTCCTAC
TTGGCAGTAC ATCTACGTAT TAGTCATCGC TATTACCATG GTGATGCGGT TTTGGCAGTA CATCAATGGG CGTGGATAGC
GGTTTGACTC ACGGGGATTT CCAAGTCTCC ACCCCATTGA CGTCAATGGG AGTTTGTTTT GGCACCAAAA TCAACGGGAC
TTTCCAAAAT GTCGTAACAA CTCCGCCCCA TTGACGCAAA TGGGCGGTAG GCGTGTACGG TGGGAGGTCT ATATAAGCAG
AGCTGGTTTA GTGAACCGTC AGATCCGCTA GCGCTACCGG TCGCCACCAT GGTGAGCAAG GGCGAGGAGC TGTTCACCGG
GGTGGTGCCC ATCCTGGTCG AGCTGGACGG CGACGTAAAC GGCCACAAGT TCAGCGTGTC CGGCGAGGGC GAGGGCGATG
CCACCTACGG CAAGCTGACC CTGAAGTTCA TCTGCACCAC CGGCAAGCTG CCCGTGCCCT GGCCCACCCT CGTGACCACC
CTGACCTACG GCGTGCAGTG CTTCAGCCGC TACCCCGACC ACATGAAGCA GCACGACTTC TTCAAGTCCG CCATGCCCGA
AGGCTACGTC CAGGAGCGCA CCATCTTCTT CAAGGACGAC GGCAACTACA AGACCCGCGC CGAGGTGAAG TTCGAGGGCG
ACACCCTGGT GAACCGCATC GAGCTGAAGG GCATCGACTT CAAGGAGGAC GGCAACATCC TGGGGCACAA GCTGGAGTAC
AACTACAACA GCCACAACGT CTATATCATG GCCGACAAGC AGAAGAACGG CATCAAGGTG AACTTCAAGA TCCGCCACAA
CATCGAGGAC GGCAGCGTGC AGCTCGCCGA CCACTACCAG CAGAACACCC CCATCGGCGA CGGCCCCGTG CTGCTGCCCG
ACAACCACTA CCTGAGGACC CAGTCCGCCC TGAGCAAAGA CCCCAACGAG AAGCGCGATC ACATGGTCCT GCTGGAGTTC
GTGACCGCCG CCGGGATCAC TCTCGGCATG GACGAGCTGT ACAAGTCCGG ACTCAGATCC ACCGGATCTA GATAACTGAT
CATAATCAGC CATACCACAT TTGTAGAGGT TTTACTTGCT TTAAAAAACC TCCCACACCT CCCCCTGAAC CTGAAACATA
AAATGAATGC AATTGTTGTT GTTAACTTGT TTATTGCAGC TTATAATGGT TACAAATAAA GCAATAGCAT CACAAATTTC
ACAAATAAAG CATTTTTTTC ACTGCATTCT AGTTGTGGTT TGTCCAAACT CATCAATGTA TCTTAACGCG AACTACGTCA
GGTGGCACTT TTCGGGGAAA TGTGCGCGGA ACCCCTATTT GTTTATTTTT CTAAATACAT TCAAATATGT ATCCGCTCAT
GAGACAATAA CCCTGATAAA TGCTTCAATA ATATTGAAAA AGGAAGAGTA TGAGTATTCA ACATTTCCGT GTCGCCCTTA
TTCCCTTTTT TGCGGCATTT TGCCTTCCTG TTTTTGCTCA CCCAGAAACG CTGGTGAAAG TAAAAGATGC TGAAGATCAG
TTGGGTGCAC GAGTGGGTTA CATCGAACTG GATCTCAACA GCGGTAAGAT CCTTGAGAGT TTTCGCCCCG AAGAACGTTC
TCCAATGATG AGCACTTTTA AAGTTCTGCT ATGTGGCGCG GTATTATCCC GTGTTGACGC CGGGCAAGAG CAACTCGGTC
GCCGCATACA CTATTCTCAG AATGACTTGG TTGAGTACTC ACCAGTCACA GAAAAGCATC TTACGGATGG CATGACAGTA
AGAGAATTAT GCAGTGCTGC CATAACCATG AGTGATAACA CTGCGGCCAA CTTACTTCTG ACAACGATCG GAGGACCGAA
GGAGCTAACC GCTTTTTTGC ACAACATGGG GGATCATGTA ACTCGCCTTG ATCGTTGGGA ACCGGAGCTG AATGAAGCCA
TACCAAACGA CGAGCGTGAC ACCACGATGC CTGTAGCAAT GGCAACAACG TTGCGCAAAC TATTAACTGG CGAACTACTT
ACTCTAGCTT CCCGGCAACA ATTAATAGAC TGGATGGAGG CGGATAAAGT TGCAGGACCA CTTCTGCGCT CGGCCCTTCC
GGCTGGCTGG TTTATTGCTG ATAAATCTGG AGCCGGTGAG CGTGGGTCTC GCGGTATCAT TGCAGCACTG GGGCCAGATG
GTAAGCCCTC CCGTATCGTA GTTATCTACA CGACGGGGAG TCAGGCAACT ATGGATGAAC GAAATAGACA GATCGCTGAG
ATAGGTGCCT CACTGATTAA GCATTGGTAA CTGTCAGACC AAGTTTACTC ATATATACTT TAGATTGATT TACCCCGGTT
GATAATCAGA AAAGCCCCAA AAACAGGAAG ATTGTATAAG CAAATATTTA AATTGTAAAC GTTAATAATT TGTTAAAATT
CGCGTTAAAT TTTTGTTAAA TCAGCTCATT TTTTAACCAA TAGGCCGAAA TCGGCAAAAT CCCTTATAAA TCAAAAGAAT
AGCCCGAGAT AGGGTTGAGT GTTGTTCCAG TTTGGAACAA GAGTCCACTA TTAAAGAACG TGGACTCCAA CGTCAAAGGG
CGAAAAACCG TCTATCAGGG CGATGGCCCA CTACGTGAAC CATCACCCAA ATCAAGTTTT TTGGGGTCGA GGTGCCGTAA
AGCACTAAAT CGGAACCCTA AAGGGAGCCC CCGATTTAGA GCTTGACGGG GAAAGCGAAC GTGGCGAGAA AGGAAGGGAA
GAAAGCGAAA GGAGCGGGCG CTAGGGCGCT GGCAAGTGTA GCGGTCACGC TGCGCGTAAC CACCACACCC GCCGCGCTTA
ATGCGCCGCT ACAGGGCGCG TAAAAGGATC TAGGTGAAGA TCCTTTTTGA TAATCTCATG ACCAAAATCC CTTAACGTGA
GTTTTCGTTC CACTGAGCGT CAGACCCCGT AGAAAAGATC AAAGGATCTT CTTGAGATCC TTTTTTTCTG CGCGTAATCT
GGTGCTTGCA AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTGCCG GATCAAGAGC TACCAACTCT TTTTCCGAAG
GTAACTGGCT TCAGCAGAGC GCAGATACCA AATACTGTTC TTCTAGTGTA GCCGTAGTTA GGCCACCACT TCAAGAACTC
TGTAGCACCG CCTACATACC TCGCTCTGCT AATCCTGTTA CCAGTGGCTG CTGCCAGTGG CGATAAGTCG TGTCTTACCG
GGTTGGACTC AAGACGATAG TTACCGGATA AGGCGCAGCG GTCGGGCTGA ACGGGGGGTT CGTGCACACA GCCCAGCTTG
GAGCGAACGA CCTACACCGA ACTGAGATAC CTACAGCGTG AGCTATGAGA AAGCGCCACG CTTCCCGAAG GGAGAAAGGC
GGACAGGTAT CCGGTAAGCG GCAGGGTCGG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC TGGTATCTTT
ATAGTCCTGT CGGGTTTCGC CACCTCTGAC TTGAGCGTCG ATTTTTGTGA TGCTCGTCAG GGGGCGGAG CCTATGGAAA
AACGCCAGCA ACGCGGCCTT TTTACGGTTC CTGGCCTTTT GCTGGCCTTT TGCTCACATG TAATGTGAGT TAGCTCACTC
ATTAGGCACC CCAGGCTTTA CACTTTATGC TTCCGGCTCC TATGTTGTGT GGAATTGTGA GCGGATAACA ATTTCACACA
GGAAACAGCT ATGACCATGA TTACGCCAAG CTACGTAATA CGACTCACTA GGCGGCCGCG TTTAAACAAT GTGCTCCTCT
TTGGCTTGCT TCCGCGGGCC AAGCCAGACA AGAACCAGTT GACGTCAAGC TTCCCGGGAC GCGTGCTAGC GGCGCGCCGA
ATTCCTGCAG GATTCGAGGG CCCCTGCAGG TCAATTCTAC CGGGTAGGGG AGGCGCTTTT CCCAAGGCAG TCTGGAGCAT
GCGCTTTAGC AGCCCCGCTG GCACTTGGCG CTACACAAGT GGCCTCTGGC CTCGCACACA TTCCACATCC ACCGGTAGCG
CCAACCGGCT CCGTTCTTTG GTGGCCCCTT CGCGCCACCT TCTACTCCTC CCCTAGTCAG GAAGTTCCCC CCCGCCCGC
AGCTCGCGTC GTGCAGGACG TGACAAATGG AAGTAGCACG TCTCACTAGT CTCGTGCAGA TGGACAGCAC CGCTGAGCAA
TGGAAGCGGG TAGGCCTTTG GGGCAGCGGC CAATAGCAGC TTTGCTCCTT CGCTTTCTGG GCTCAGAGGC TGGGAAGGGG

FIGURE 3B1

TGGGTCCGGG GGCGGGCTCA GGGGCGGGCT CAGGGGCGGG GCGGGCGCGA AGGTCCTCCC GAGGCCCGGC ATTCTCGCAC
GCTTCAAAAG CGCACGTCTG CCGCGCTGTT CTCCTCTTCC TCATCTCCGG GCCTTTCGAC CTGCAGCCAA TATGGGATCG
GCCATTGAAC AAGATGGATT GCACGCAGGT TCTCCGGCCG CTTGGGTGGA GAGGCTATTC GGCTATGACT GGGCACAACA
GACAATCGGC TGCTCTGATG CCGCCGTGTT CCGGCTGTCA GCGCAGGGGC GCCCGGTTCT TTTTGTCAAG ACCGACCTGT
CCGGTGCCCT GAATGAACTG CAGGACGAGG CAGCGCGGCT ATCGTGGCTG GCCACGACGG GCGTTCCTTG CGCAGCTGTG
CTCGACGTTG TCACTGAAGC GGGAAGGGAC TGGCTGCTAT TGGGCGAAGT GCCGGGGCAG GATCTCCTGT CATCTCACCT
TGCTCCTGCC GAGAAAGTAT CCATCATGGC TGATGCAATG CGGCGGCTGC ATACGCTTGA TCCGGCTACC TGCCCATTCG
ACCACCAAGC GAAACATCGC ATCGAGCGAG CACGTACTCG GATGGAAGCC GGTCTTGTCG ATCAGGATGA TCTGGACGAA
GAGCATCAGG GGCTCGCGCC AGCCGAACTG TTCGCCAGGC TCAAGGCGCG CATGCCCGAC GGCGATGATC TCGTCGTGAC
CCATGGCGAT GCCTGCTTGC CGAATATCAT GGTGGAAAAT GGCCGCTTTT CTGGATTCAT CGACTGTGGC CGGCTGGGTG
TGGCGGACCG CTATCAGGAC ATAGCGTTGG CTACCCGTGA TATTGCTGAA GAGCTTGGCG GCGAATGGGC TGACCGCTTC
CTCGTGCTTT ACGGTATCGC CGCTCCCGAT TCGCAGCGCA TCGCCTTCTA TCGCCTTCTT GACGAGTTCT TCTGAGGGGA
TCGATCCGTC CTGTAAGTCT GCAGAAATTG ATGATCTATT AAACAATAAA GATGTCCACT AAAATGGAAG TTTTTCCTGT
CATACTTTGT TAAGAAGGGT GAGAACAGAG TACCTACATT TTGAATGGAA GGATTGGAGC TACGGGGGTG GGGGTGGGGT
GGGATTAGAT AAATGCCTGC TCTTTACTGA AGGCTCTTTA CTATTGCTTT ATGATAATGT TTCATAGTTG GATATCATAA
TTTAAACAAG CAAAACCAAA TTAAGGGCCA GCTCATTCCT CCCACTCATG ATCTATAGAT CTATAGATCT CTCGTGGGAT
CATTGTTTTT CTCTTGATTC CCACTTTGTG GTTCTAAGTA CTGTGGTTTC CAAATGTGTC AGTTTCATAG CCTGAAGAAC
GAGATCAGCA GCCTCTGTTC CACATACACT TCATTCTCAG TATTGTTTTG CCAAGTTCTA ATTCCATCAG AAGCTGACTC
TAGATCTGGA TCCGGCCAGC TAGGCCGTCG ACCTCGAGTG ATCAGGTACC AAGGTCCTCG CTCTGTGTCC GTTGAGCTCG
ACGACACAGG ACACGCAAAT TAATTAAGGC CGGCCGTAC CCTCTAGTCA AGGCCTTAAG TGAGTCGTAT TACGGACTGG
CCGTCGTTTT ACAACGTCGT GACTGGGAAA ACCCTGGCGT TACCCAACTT AATCGCCTTG CAGCACATCC CCCTTTCGCC
AGCTGGCGTA ATAGCGAAGA GGCCCGCACC GATCGCCCTT CCCAACAGTT GCGCAGCCTG AATGGCGAAT GGCGCTTCGC
TTGGTAATAA AGCCCGCTTC GGCGGGCTTT TTTTT

FIGURE 3B2

| Annealing site | Sequence | Sequence after digestion |
|---|---|---|
| 1 | 5' tgtgctcctctttggcttgcttccaa... 3'<br>3' acacgaggagaaaccgaacgaaggtt... 5' | 5' tgtgctcctctttggcttgcttccaa... 3'<br>3' tt... 5' |
| 2 | 5' ctggttcttgtctggcttggcccaa... 3'<br>3' gaccaagaacagaccgaaccgggtt... 5' | 5' ctggttcttgtctggcttggcccaa... 3'<br>3' tt... 5' |
| 3 | 5' ggtcctcgctctgtgtccgttgaa... 3'<br>3' ccaggagcgagacacaggcaactt... 5' | 5' ggtcctcgctctgtgtccgttgaa... 3'<br>3' tt... 5' |
| 4 | 5' tttgcgtgtcctgtgtcgtcgaa... 3'<br>3' aaacgcacaggacacagcagctt... 5' | 5' tttgcgtgtcctgtgtcgtcgaa... 3'<br>3' tt... 5' |

FIGURE 4

| Annealing site | Sequence | Sequence after digestion |
|---|---|---|
| 1 | 5' AAtgtgctcctctttggcttgcttCCGC 3'<br>3' Ttacacgaggagaaaccgaacgaagg 5' | 5' AA 3'<br>3' Ttacacgaggagaaaccgaacgaagg 5' |
| 2 | 5' AActggttcttgtctggcttggCCCGC 3'<br>3' Ttgaccaagaacagaccgaaccggg 5' | 5' AA 3'<br>3' Ttgaccaagaacagaccgaaccggg 5' |
| 3 | 5' AAggtcctcgctctgtgtccgttGAGCT 3'<br>3' Ttccaggagcgagacacaggcaac 5' | 5' AA 3'<br>3' Ttccaggagcgagacacaggcaac 5' |
| 4 | 5' AAtttgcgtgtcctgtgtcgtcGAGCT 3'<br>3' Ttaaacgcacaggacacagcagc 5' | 5' AA 3'<br>3' Ttaaacgcacaggacacagcagc 5' |

FIGURE 5

FIGURE 6

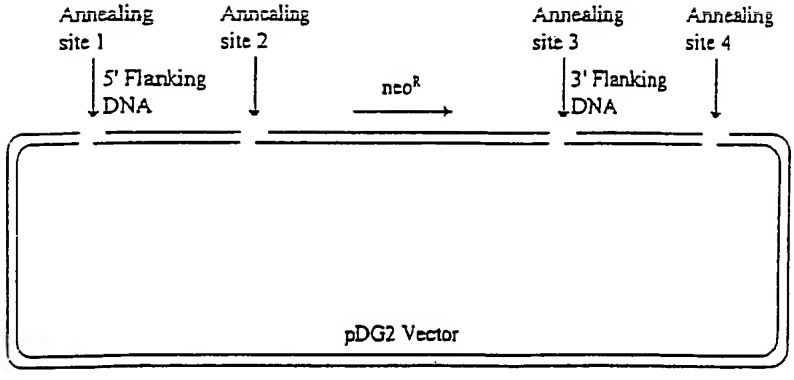
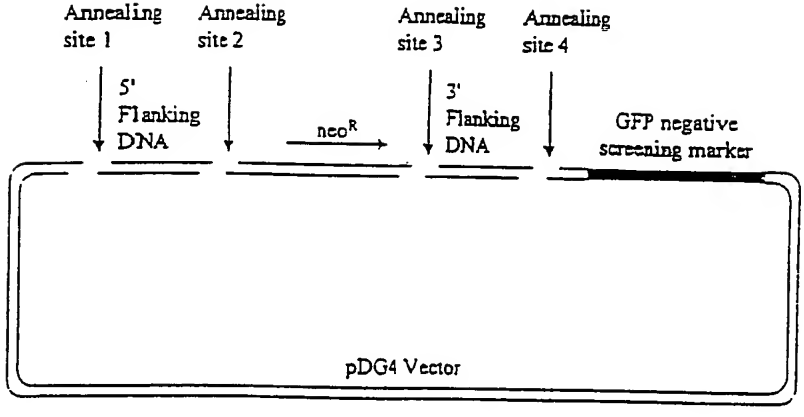

Annealing site 1
Annealing site 2
Annealing site 3
Annealing site 4
5' Flanking DNA
neo^R
3' Flanking DNA
pDG2 Vector

FIGURE 7


Annealing site 1
Annealing site 2
Annealing site 3
Annealing site 4
5' Flanking DNA
neo^R
3' Flanking DNA
GFP negative screening marker
pDG4 Vector

| Oligo# | Sequence (5' to 3') |
|---|---|
| 174 | ATGACCGCTCAGGAAACCTGTTGCA |
| 180 | ATAGGCATAGTAGGCCAGCTTGAGG |
| 454 | tgtgctcctctttggcttgcttccAATTAACCCTCACTAAAGGGAACGAAT |
| 463 | ctggttcttgtctggcttggcccaaTGCAACAGGTTTCCTGAGCGGTCAT |
| 464 | ggtcctcgctctgtgtccgttgaaCCTCAAGCTGGCCTACTATGCCTAT |
| 42 | tttgcgtgtcctgtgtcgtcgaaCGACTAATACGACTCACTATAGGGCG |
| 151 | GCCAATGGACTCTTAGTTTTGGAAC |
| 155 | GTTCTGGCAAACAAATTCGGCGCAC |
| 454 | tgtgctcctctttggcttgcttccAATTAACCCTCACTAAAGGGAACGAAT |
| 465 | ctggttcttgtctggcttggcccaaGTTCCAAAACTAAGAGTCCATTGGC |
| 466 | ggtcctcgctctgtgtccgttgaaGTGCGCCGAATTTGTTTGCCAGAAC |
| 1 | GAACCTTGGTGTGCCAAGTTACTTC |
| 2 | GAACTTTGGCTGAACCCCTTGTTCT |
| 41 | tgtgctcctctttggcttgcgttgaaCGACTAATACGACTCACTATAGGGCG |
| 38 | ctggttcttgtctggcttggcccaaGAAGTAACTTGGCACACCAAGGTTC |
| 40 | ggtcctcgctctgtgtccgttgaAGAACAAGGGGTTCAGCCAAAGTTC |
| 37 | tttgcgtgtcctgtgtcgtcgAATTAACCCTCACTAAAGGGAACGAAT |
| 540 | ATGCCGGATCTCCTACTACTGGGCC |
| 546 | TGTCATAGTAGACAGCGATGGAACG |
| 445 | GACAAGAACCAGTTGACGTCAAGCTTCCCGGGACGCGTGCTAGCGGCGCGCCG |
| 667 | ctggttcttgtctggcttggcccaaGGCCCAGTAGTAGGAGATCCGGCAT |
| 668 | ggtcctcgctctgtgtccgttgaaCGTTCCATCGCTGTCTACTATGACA |
| 907 | ctggttcttgtctggcttggcccaaAAAGCCGACAGCCACGCTCACAAGC |
| 908 | ggtcctcgctctgtgtccgttgaaGCCCAATGCCACAGAGACAGAATGT |
| 1157 | ctggttcttgtctggcttggcccaaGTTGGATCCTCTCCAAGGCCCCATCT |
| 1158 | ggtcctcgctctgtgtccgttgaaCTCCAGTGCCGAGTGTGTGGGGACAG |

Figure 8